

Application No. 09/672,812  
Reply to the Final Office Action mailed February 27, 2004  
and to the Advisory Action mailed July 13, 2004

Patent  
Attorney Docket No. 85773-332

## II. REMARKS/ARGUMENTS

### A. Summary of the Amendments

The present application now contains 25 claims.

Claims 1-5, 8-15 and 17-19 have been amended. New claims 20-25 have been added to the application. Support for the amendments made to claims 1-5, 8-15 and 17-19 and for new claims 20-25 can be found, *inter alia*, on page 9, lines 15-34 of the specification as originally filed.

It is respectfully submitted that no new matter has been added to the application under the present amendment.

### B. Summary of Rejections and Reply

#### **1) Rejection of claims 1-5 under 35 USC 103**

On page 2 of the Final Office Action mailed February 27, 2004, the Examiner has rejected claims 1-5 under 35 USC 103(a) as being "anticipated by" [sic]<sup>1</sup> Schopfer U.S. Patent No. 5,249,226 (hereinafter referred to as "Schopfer") in view of Zhou U.S. Patent No. 6,178,241 (hereinafter referred to as "Zhou"). Furthermore, the Examiner has raised other arguments in the "Response to Arguments" section on page 2 of the Advisory Action.

As discussed below, the Applicant respectfully submits that claims 1-5, as affected by the present amendment, are in condition for allowance.

<sup>1</sup> It is assumed that the Examiner meant "unpatentable over".

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Independent claim 1

The Examiner's attention is directed to the following features of amended claim 1:

"A feed arrangement for a telephone subscriber loop having a plurality of conductors, comprising:

(...)

- b) a control element operative for:
  - i. **deriving a data element indicative of a rate of change of a current in the subscriber loop;**
  - ii. **processing the data element indicative of a rate of change of a current in the subscriber loop to derive a variation in a number of CPEs active in the telephone subscriber loop;**
  - iii. **determining a target loop current on the basis of the variation in a number of CPEs active in the subscriber loop; and**
  - iv. **regulating a magnitude of a current in the subscriber loop to the target loop current."**

It is respectfully submitted that Schopfer in view of Zhou does not explicitly disclose or implicitly suggest the above-emphasized features of claim 1.

Firstly, as conceded by the Examiner on page 3 of the Final Office Action, Schopfer does not disclose a first feature of claim 1, namely "deriving a data element indicative of a rate of change of a current in the subscriber loop". Furthermore, since no such data element is derived in Schopfer, Schopfer cannot possibly be held to disclose or suggest a second feature of claim 1, namely "processing the data element [...] to derive a variation in a number of CPEs active in the subscriber loop". Moreover, Schopfer makes no mention or remote suggestion of a third feature of claim 1, namely "determining a target loop current on the basis of the variation in a number of CPEs active in the subscriber loop".

Secondly, it is respectfully submitted that Zhou does not disclose or suggest at least one of the above features of claim 1 already shown to be missing from Schopfer. Specifically, Zhou describes a system having a switch hook detection module to determine the status of a switch hook in a subscriber loop (col. 11, lines 20-22). This status of the switch hook is used by Zhou's system for "identifying and forwarding to

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the central office (...) a number dialed by a terminal equipment based upon the number of make and break connections determined by the switch hook detection module" (col. 13, lines 16-24).

However, it is abundantly clear that Zhou is totally unconcerned with, and makes no mention or suggestion of "determining a target loop current on the basis of the variation in a number of CPEs active in the subscriber loop". In fact, Zhou is totally lacking any mention or suggestion of "determining a target loop current" for purposes of current regulation, let alone "determining a target loop current on the basis of [a] variation in a number of CPEs active in the subscriber loop".

In light of the above, it is respectfully submitted that there is at least one feature of claim 1 which is neither taught nor suggested by the cited art, whether taken separately or in combination. Therefore, the Applicant respectfully submits that at least one criterion required for establishing a *prima facie* case of obviousness in accordance with MPEP 706.02(j) is not satisfied<sup>2</sup>. The Examiner is thus respectfully requested to withdraw his rejection of claim 1. It is respectfully submitted that claim 1 is in condition for allowance.

#### Dependent claims 2-5

Claims 2-5 depend either directly or indirectly on claim 1 and therefore include all of the features of claim 1. Hence, for the same reasons as those set forth herein above in respect of claim 1, the Applicant respectfully submits that claims 2-5 are in condition for allowance. The Examiner is thus respectfully requested to withdraw his rejection of claims 2-5.

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<sup>2</sup> For the Examiner to establish a *prima facie* case of obviousness, three criteria must be considered: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art references must teach or suggest all of the claim limitations. MPEP §§ 706.02(j), 2142 (8th ed.).

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## 2) Rejection of claims 6-8 under 35 USC 103

On page 5 of the Final Office Action, the Examiner has rejected claims 6-8 under 35 USC 103(a) as being unpatentable over Schopfer U.S. Patent No. 5,249,226 (hereinafter referred to as "Schopfer") and Zhou U.S. Patent No. 6,178,241 (hereinafter referred to as "Zhou") as applied to claims 1-5 above, and further in view of Jakab U.S. Patent No. 5,333,196 (hereinafter referred to as "Jakab").

As set forth herein below, the Applicant respectfully submits that claims 6-8, as affected by the present amendment, are in condition for allowance.

Claims 6-8 depend either directly or indirectly on claim 1 and therefore include all of the features of claim 1, including the at least one feature already shown to be missing from the combination of Schopfer and Zhou. An example of such a feature is "determining a target loop current on the basis of [a] variation in a number of CPEs active in the subscriber loop".

In addition, it is respectfully submitted that the Examiner has not shown that Jakab discloses or suggests the missing features of claims 6-8. In particular, the Examiner has not successfully applied Jakab to show a teaching or suggestion of "determining a target loop current on the basis of [a] variation in a number of CPEs active in the subscriber loop".

In light of the above, it is respectfully submitted that there is at least one feature of claims 6-8 which is neither taught nor suggested by the cited art, whether taken separately or in combination. Therefore, the Applicant respectfully submits that there is at least one criterion required for establishing a *prima facie* case of obviousness in accordance with MPEP 706.02(j) which has not been satisfied. The Examiner is thus respectfully requested to withdraw his rejection of claims 6-8. It is respectfully submitted that claims 6-8 are in condition for allowance.

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### 3) Rejection of claims 9-17 under 35 USC 103

On page 6 of the Final Office Action, the Examiner has rejected claims 9-17 under 35 USC 103(a) as being unpatentable over Schopfer U.S. Patent No. 5,249,226 (hereinafter referred to as "Schopfer"), and further in view of Jakab U.S. Patent No. 5,333,196 (hereinafter referred to as "Jakab") and Zhou U.S. Patent No. 6,178,241 (hereinafter referred to as "Zhou").

As set forth herein below, the Applicant respectfully submits that claims 9-17, as affected by the present amendment, are in condition for allowance.

#### Independent claim 9

The Examiner's attention is directed to the following features of amended claim 9:

"In combination:

- a) a power supply;
- b) a feed arrangement for a telephone subscriber loop having a plurality of conductors, including:
  - (...)
  - iii) a control element operative for:
    - a. deriving a data element indicative of a rate of change of a current in the subscriber loop;
    - b. processing the data element indicative of a rate of change of a current in the subscriber loop to derive a variation in a number of CPEs active in the telephone subscriber loop;
    - c. determining a target loop current on the basis of the variation in a number of CPEs active in the subscriber loop; and
    - d. regulating a magnitude of a current in the subscriber loop to the target loop current."

The above-emphasized features of claim 9 are similar to those appearing in claim 1, including the feature of "determining a target loop current on the basis of [a] variation in a number of CPEs active in the subscriber loop", which was shown above to be absent from the combination of Schopfer and Zhou.

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In addition, it is respectfully submitted that the Examiner has not shown that Jakab discloses or suggests the missing features of claims 6-8. In particular, the Examiner has not successfully applied Jakab to show a teaching or suggestion of "determining a target loop current on the basis of [a] variation in a number of CPEs active in the subscriber loop".

In light of the above, it is respectfully submitted that there is at least one feature of claim 9 which is neither taught nor suggested by the cited art, whether taken separately or in combination. Therefore, the Applicant respectfully submits that there is at least one criterion required for establishing a *prima facie* case of obviousness in accordance with MPEP 706.02(j) which has not been satisfied. The Examiner is thus respectfully requested to withdraw his rejection of claim 9. It is respectfully submitted that claim 9 is in condition for allowance.

#### Dependent claims 10-17

Claims 10-17 depend either directly or indirectly on claim 9 and therefore include all of the features of claim 9. Hence, for the same reasons as those set forth herein above in respect of claim 9, the Applicant respectfully submits that claims 10-17 are in condition for allowance. The Examiner is thus respectfully requested to withdraw his rejection of claims 10-17.

#### **4) Rejection of claim 18 under 35 USC 103**

On page 11 of the Final Office Action, the Examiner has rejected claim 18 under 35 USC 103(a) as being "anticipated" [sic]<sup>3</sup> over Schopfer U.S. Patent No. 5,249,226 (hereinafter referred to as "Schopfer") in view of Zhou U.S. Patent No. 6,178,241 (hereinafter referred to as "Zhou").

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<sup>3</sup> It is assumed that the Examiner meant "unpatentable over".

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As set forth herein below, the Applicant respectfully submits that claim 18, as affected by the present amendment, is in condition for allowance.

Independent claim 18

The Examiner's attention is directed to the following features of amended claim 18:

"A method for regulating a magnitude of a current in a subscriber loop, comprising:

- a) **deriving a data element indicative of a rate of change of the current in the subscriber loop;**
- b) **processing the data element indicative of a rate of change of the current in the subscriber loop to derive a variation in a number of CPEs active in the telephone subscriber loop;**
- c) **determining a target loop current on the basis of the variation in a number of CPEs active in the subscriber loop; and**
- d) **regulating the magnitude of the current to the target loop current."**

The above-emphasized features of claim 18 are similar to those appearing in claim 1, including the feature of "determining a target loop current on the basis of [a] variation in a number of CPEs active in the subscriber loop", which was shown above to be absent from the combination of Schopfer and Zhou.

In light of the above, it is respectfully submitted that there is at least one feature of claim 18 which is neither taught nor suggested by the cited art, whether taken separately or in combination. Therefore, the Applicant respectfully submits that there is at least one criterion required for establishing a *prima facie* case of obviousness in accordance with MPEP 706.02(j) which has not been satisfied. The Examiner is thus respectfully requested to withdraw his rejection of claim 18. It is respectfully submitted that claim 18 is in condition for allowance.

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### 5) Rejection of claim 19 under 35 USC 103

On page 12 of the Final Office Action, the Examiner has rejected claim 19 under 35 USC 103(a) as being "anticipated" [sic]<sup>4</sup> over Schopfer U.S. Patent No. 5,249,226 (hereinafter referred to as "Schopfer") in view of Zhou U.S. Patent No. 6,178,241 (hereinafter referred to as "Zhou").

As set forth herein below, the Applicant respectfully submits that claim 19, as affected by the present amendment, is in condition for allowance.

#### Independent claim 19

The Examiner's attention is directed to the following features of amended claim 19:

"A feed arrangement for a telephone subscriber loop having a plurality of conductors, comprising:

(...)

- b) control means for:
  - i. deriving a data element indicative of a rate of change of a current in the subscriber loop;
  - ii. processing the data element indicative of a rate of change of a current in the subscriber loop to derive a variation in a number of CPEs active in the telephone subscriber loop;
  - iii. determining a target loop current on the basis of the variation in a number of CPEs active in the subscriber loop; and
  - iv. regulating a magnitude of a current in the subscriber loop to the target loop current."

The above-emphasized features of claim 9 are similar to those appearing in claim 1, including the feature of "determining a target loop current on the basis of [a] variation in a number of CPEs active in the subscriber loop", which was shown above to be absent from the combination of Schopfer and Zhou.

<sup>4</sup> It is assumed that the Examiner meant "unpatentable over".

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In light of the above, it is respectfully submitted that there is at least one feature of claim 19 which is neither taught nor suggested by the cited art, whether taken separately or in combination. Therefore, the Applicant respectfully submits that at least one criterion required for establishing a *prima facie* case of obviousness in accordance with MPEP 706.02(j) which has not been satisfied. The Examiner is thus respectfully requested to withdraw his rejection of claim 19. It is respectfully submitted that claim 19 is in condition for allowance.

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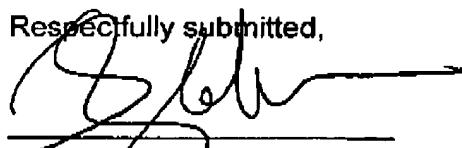
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## II. CONCLUSION

In view of the foregoing, the Applicant is of the view that claims 1-25 are in condition for allowance. Favorable reconsideration is requested. Early allowance of the Application is earnestly solicited.

If the claims of the application are not considered to be in full condition for allowance, for any reason, the Applicant respectfully requests the constructive assistance and suggestions of the Examiner in drafting one or more acceptable claims pursuant to MPEP 707.07(j) or in making constructive suggestions pursuant to MPEP 706.03 so that the application can be placed in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,



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